

WHAT IS CLAIMED IS:

1. A method for fabricating an inductor comprising:
 - 5 forming a first spiral inductor having a first end at an outer radius of said spiral and a second end at an inner radius of said spiral on a first layer of a substrate;
forming a second spiral inductor having a first end at an inner radius of said spiral and a second end at an outer radius of said spiral on a second layer of said substrate; and
10 electrically coupling said first end of said second spiral inductor to said second end of said first spiral inductor through a via disposed between the first and second layers.
2. The method of Claim 1, further comprising:
 - 15 forming a third spiral inductor having a first end at an outer radius of said spiral and a second end at an inner radius of said spiral on a third layer of said substrate; and
electrically coupling said first end of said third spiral inductor to said second end of said second spiral inductor through a via disposed between the second and third layers.
3. The method of Claim 1, wherein said forming said first spiral inductor and
20 forming said second spiral inductor each comprise forming each of said first and second spiral conductors into concentric shapes of at least two turns, wherein each turn is comprised of at least five segments.
4. The method of Claim 1, wherein said first and second spiral
25 inductors have thickness of between 1 and 4 μm .
5. The method of Claim 1, wherein said first and second spiral inductors comprise a conductive metal taken from the group consisting of Cu, Al and alloys thereof.
- 30 6. A stacked inductor comprising:
 - a first spiral inductor having a first end at an outer radius of said spiral and a second end at an inner radius of said spiral on a first layer of a substrate; and
a second spiral inductor having a first end at an inner radius of said spiral and a second end at an outer radius of said spiral on a second layer of said substrate;

said first end of said second spiral inductor electrically coupled to said second end of said first spiral inductor through a via disposed between the first and second layers.

5 7. The stacked inductor of Claim 6, further comprising a third spiral inductor having a first end at an outer radius of said spiral and a second end at an inner radius of said spiral on a third layer of said substrate, wherein said second end of said second spiral inductor electrically coupled to said first end of said third spiral inductor.

10 8. The stacked inductor of Claim 6, wherein said first and second spiral inductors have thickness of between 1 and 4 μm .

 9. The stacked inductor of Claim 6, wherein said first and second spiral inductors comprise a conductive metal taken from the group consisting of
15 Cu, Al and alloys thereof.

 10. A stacked inductor comprising:
 a substrate; and
 a plurality of planer spiral shaped inductors having a first end and a second
20 end, each planer spiral shaped inductor disposed on a different layer of said substrate,
 a first end of each of said planer spiral shaped inductors electrically coupled to a second of another planer spiral shaped inductors disposed on an adjacent layer.

25 11. The stacked inductor of Claim 10, wherein said plurality of planer spiral shaped inductors comprises spiral inductors formed into concentric shapes of at least two turns, wherein each turn includes at least five straight segments.

30 12. The stacked inductor of Claim 10, wherein said plurality of planer spiral shaped inductors comprises:
 a first spiral inductor having a first end at an outer radius and a second end at an inner radius disposed on a first layer of said different layers of said substrate;
 and

a second spiral inductor having a first end at an inner radius and a second end at an outer radius disposed on a second layer of said different layers of said substrate;

said first end of said second spiral inductor electrically coupled to said second end of said first spiral inductor through a via disposed between the first and second layers.

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13. The stacked inductor of Claim 12, further comprising a third spiral inductor having a first end at an outer radius and a second end at an inner radius disposed on a third layer of said different layers of said substrate, wherein said second end of said second spiral inductor is electrically coupled to said first end of said third spiral inductor.

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14. The stacked inductor of Claim 10, wherein said plurality of planar spiral shaped inductors comprises a conductive metal taken from the group consisting of Cu, Al and alloys thereof.

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15. The stacked inductor of Claim 10, wherein said plurality of planar spiral shaped inductors comprises a thickness of between 1 and 4 μm .

16. A stacked inductor comprising:

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a first inductor formed in a spiral having at least two turns and at least five segments and having a first end positioned at an outer radius of said spiral and a second end positioned at an inner radius of said spiral; and

a second inductor formed in a spiral having at least two turns and at least five segments and having a first end positioned at an inner radius of said spiral and a second end positioned at an outer radius of said spiral;

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said second end of said first inductor electrically coupled to said first end of said second inductor.

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